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Enclosure 1

Utilization of ERTS-1 Data in the Houston Area

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The Signature Extension Team has identified the following significant results. Using clustering techniques, several large lakes in Texas have been accurately delineated in computer printout graymaps. It was also found that small bodies of water (one to two acres in size) could be detected by searching for small reflectance values in the infrared data. A graymap printout of a lake described a shore outline that was not consistent with available maps. Field examination revealed that the actual level of the lake was below that for which the map was drawn. The current lake configuration agrees in shape and relative size with the ERTS-1 data printout.

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IN THE HOUSTON AREA (NASA) 2 p HC
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The Coastal Analysis Team has identified the following significant results. Water turbidity causes reflectance changes which are detectable in ERTS-1 band-7 data. A comparison has been made of the Monterey Bay, California area using 1971 aerial color infrared photography and a 1972 ERTS-1 band-7 infrared image. This comparison revealed that some event has occurred to impound a significant amount of water in the area since the infrared photography was taken. Data values in the ERTS-1 infrared image exhibit detectable changes in brightness at inflow points, where high turbidity would be present. Researchers had not expected to detect detailed water turbidity patterns in band-7 (800 to 1100 nanometers).